

THE **ULTIMATE** SAT[®] STUDY GUIDE

**SCORE
HIGH!**



 **C2 education**

WHAT'S INSIDE?

1. SAT Overview	3
2. SAT Format	3
3. SAT Prep Tips and Strategies	5
4. SAT Reading & Writing	7
5. SAT Math	12
6. Answer Explanations	14
7. How Should I Prepare?.....	18

SAT OVERVIEW

SAT and ACT scores continue to be important for college admissions. In 2024, several top-ranked colleges embraced test-required policies, a trend that is likely to continue to grow in coming years. Ivies including Cornell, Harvard, Brown, and Dartmouth; engineering schools like MIT, CalTech, and Georgia Tech; and large state schools like the University of Georgia and University of Texas at Austin have all started requiring test scores again.

Even at test-optional schools, submitting strong SAT or ACT scores has been shown to boost a student's chances for admission. In fact, at some schools, students who submit scores are admitted at twice the rate of those who do not.

It's no surprise that millions of students worry about how best to prepare for these important tests. One of the best places to start is with an understanding of what the test looks like. If you already know about the format and timing of the test, you're less likely to have an unpleasant surprise on test day!

SAT FORMAT

How long is the test? What's on it?

The SAT is an adaptive assessment. In each section, you'll see two modules. The first is a baseline module. Your performance on this module determines how difficult the second module will be. It might sound tempting to try to score into an easier second module—after all, easier is better, right? Not on the SAT! Scoring into an easier second module limits your score, making it all but impossible to score above around 600 on that section.

SECTION	MODULES	TIMING	NUMBER OF QUESTIONS	CONTENT
READING AND WRITING	Module 1: Baseline Module	32 Minutes	27 questions	<ul style="list-style-type: none"> • Vocabulary in context • Reading comprehension • Understanding charts and graphs • Grammar and Usage • Rhetorical skills
	Module 2: Adaptive Module	32 Minutes	27 questions	
MATH	Module 1: Baseline Module	35 Minutes	22 questions 75% are multiple choice 25% are student-produced response	<ul style="list-style-type: none"> • Algebra • Problem-solving and data analysis • Geometry • Trigonometry • Advanced math
	Module 2: Adaptive Module	35 Minutes	22 questions 75% are multiple choice 25% are student-produced response	
TOTAL TIME: 2 HOURS, 14 MINUTES				

SAT PREP TIPS AND STRATEGIES



1. Set Clear Goals

Colleges typically publish information about the test scores of previously admitted students. Using resources like the [College Board's Big Future](#) site, the [NCES's College Navigator](#), or individual college websites, find out what the median SAT scores are at the colleges where you'll apply.

The median SAT score range shows you the middle 50% of scores for students who got in, which gives you a good idea of what kinds of scores the college is looking for. To stand a strong chance of admission, you'll want to set your goals near the top of the median range at the schools where you're applying.

2. Take a Diagnostic Practice Test

Before you create a plan of action, you need to establish how far you need to go. Take a full-length timed practice test to figure out where you stand right now. The more realistic the testing conditions, the more accurate your results, so consider taking a diagnostic SAT at your local C2 Education center to mimic test day conditions.

3. Create a Plan

Once you know how far you need to go, you can start creating a plan to get there. Your SAT prep could take many different forms: self-study, online study, private tutor, or test prep classes. C2 Education will work with you to create a custom plan that is suited to your specific goals and incorporates full-length practice tests.

No matter what form your SAT prep takes, you'll need to approach test prep with a clear plan in mind. Figure out how much time you can reasonably dedicate to SAT prep each week and block that time off in your schedule. Decide how to allocate your study time to different SAT subjects so that you have plenty of time to focus on your weakest subject areas while still leaving time to review the areas you already do well in.

4. Don't Skip Over Strengths

One of the biggest mistakes students make is skipping their strongest areas during test prep. Let's say you're awesome at math but your reading score is really low. You might decide to dedicate all of your test prep time to reading in order to get that low score up, leaving no time for math. But by doing that, you let those math skills get rusty. The gains you see in reading can easily be offset by lower math scores.

5. Practice Makes Perfect

The more practice you get with SAT problems, the higher your scores will go. With each practice problem that you do, go over the answer carefully – even if you get it right! If you get the question right, make sure you really understand why the correct answer is the correct answer and that it's not just a good guess. If you get the question wrong, make sure you understand how you went wrong. On the next few pages, you'll find practice questions from each of the three multiple-choice sections of the SAT.

SAT READING & WRITING

Directions: Choose the best answer for each of the following questions.

1. The following text is adapted from Lewis Carroll’s 1865 novel, *Alice’s Adventures in Wonderland*.

It was so long since she had been anything near the right size, that it felt quite strange at first; but she got used to it in a few minutes [...] “Come, there’s half my plan done now! How puzzling all these changes are! I’m never sure what I’m going to be, from one minute to another! However, I’ve got back to my right size: the next thing is, to get into that beautiful garden—how is that to be done, I wonder?” As she said this, she came suddenly upon an open place, with a little house in it about four feet high. “Whoever lives there,” thought Alice, “it’ll never do to come upon them this size: why, I should frighten them out of their wits!” So she began nibbling at the righthand bit again and did not venture to go near the house till she had brought herself down to nine inches high.

Which choice best states the function of the underlined sentence in the text as a whole?

- A) It describes a change in the setting of the story.
 - B) It illustrates the importance of the little house.
 - C) It illustrates the size of the house Alice finds.
 - D) It defines what is the “right size” for Alice.
2. The balls of ice we know as hail result from the intense updrafts of strong thunderstorms. Hail Alley is a zone spanning much of the Central High Plains of the United States where the higher elevation leads to deeper cold layers within thunderstorms. This zone is _____ for spawning very large, and potentially dangerous, hailstones. Other parts of the world famous for huge hail include central Argentina, eastern India and Bangladesh, and parts of the Sahel of central Africa.

Which choice completes the text with the most logical and precise word or phrase?

- A) Fabled
- B) Notorious
- C) Celebrated
- D) Curious

Musical artist	Percent of Taylor Swift's gross earnings
Taylor Swift	100%
Beyoncé	56%
Bruce Springsteen & the E Street Band	36%
Coldplay	31%
Harry Styles	28%

3. Top five highest grossing musical tours (2023)

In 2023, musician Taylor Swift accomplished the seemingly impossible: She grossed over \$1 billion in sales during a single tour. She broke the all-time record for a single tour remarkably quickly, too, because the tour only took place between March and November. 2023 was clearly the year of Swift; that year, no other musical artist came even remotely close to the record she set.

Which choice best describes data from the table that support the author's conclusion?

- A) When compared to the top-grossing musical tours of all time, Swift's 2023 total is still incredibly impressive.
 - B) Three musical artists (Beyoncé, Bruce Springsteen & the E Street Band, and Coldplay) earned at least 30% of what Swift did.
 - C) The second-highest grossing concert tour, by Beyonce, earned only 56% of what Swift's tour made.
 - D) Of the top five of 2023's highest concert tour gross sales, Harry Styles earned the least at only 28% of what Swift earned.
4. We make sense of ourselves by taking the disparate pieces of our lives and placing them together into a narrative, sometimes called a narrative identity. The patterns in our narrative identities shape the way we live our lives. Those who tend to tell redemptive stories that transition from bad to good also tend to be more driven to contribute to society and the future. On the opposite end of the spectrum, those who tell stories that trend from good to bad are often less driven to contribute and more likely to be anxious and depressed. Narrative psychologists posit that we can edit, revise, and interpret our narratives even as we are constrained by the facts. Through editing and reinterpreting our stories, we can regain control of our lives and find meaning in hardships. Studies have found this form of therapy to be as effective as antidepressants or cognitive behavioral therapy.

According to the text, how do narrative identities influence mental health?

- A) They define our willingness to contribute to society.
- B) They shape the ways we see ourselves and our roles in society.
- C) They correlate with mental health issues like depression and anxiety.
- D) They make hardships easier to bear.

5. Before the invention of clocks, several civilizations used sundials to mark the passage of time. The earliest known sundials are the “shadow clocks” of ancient Egypt; these feature a gnomon, or a thin, stationary blade, that casts a shadow as the sun moves across the sky. Lines corresponding to the hour of the day would be etched into the surface of the sundial, meaning that the shadow of the gnomon corresponds with the hour of the day. The usefulness of the gnomon was therefore largely affected by meteorological conditions, _____

Which choice most logically completes the text?

- A) such as extremely rainy days that reduced the gnomon’s visibility.
 - B) like during days that were stormy or quite overcast.
 - C) such as times when the gnomon’s cast shadow was too small.
 - D) like when wind caused the gnomon to move too much.
6. Tap dancing is a lively and rhythmic form of dance that developed from the fusion of African rhythms and performance styles with European techniques of footwork. It is characterized by the use of specialized shoes with metal taps on the _____ metal taps are used to create percussive sounds as the tap dancer performs.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A) soles the
 - B) soles. The
 - C) soles, the
 - D) soles and the
7. Inflation is a general and ongoing rise in the level of prices in an entire economy. Inflation does not refer to a change in relative prices. A relative price change occurs when you see that the price of tuition has risen _____ Inflation, on the other hand, means that there is pressure for prices to rise in most markets in the economy.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A) while the price of laptops has fallen.
- B) while the price of laptops will have fallen.
- C) but the price of laptops has fallen.
- D) but the price of laptops will have fallen.

8. In 2023, the Guinness World Records officially dubbed Pepper X the world’s hottest chili pepper. Pepper X has a rating of an average of 2.69 million Scoville heat units (SHU). On the SHU scale, zero is considered bland, while a regular jalapeño pepper registers at about 5,000 ____ pepper spray used in self-defense is about 1.6 million SHU.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A) SHU; and, for a non-food comparison,
 - B) SHU, and for a non-food comparison
 - C) SHU, and, for a non-food comparison,
 - D) SHU, for a non-food comparison
9. The largest saltwater lake in the Western Hemisphere is the Great Salt Lake, located in Utah. It has no rivers exiting it, so water never leaves the lake except through evaporation ____ the lake keeps all of its mineral content, and the lake is becoming saltier every year. The large amount of salt left behind after water evaporates makes the remaining water unusually dense, so people can float more easily in the Great Salt Lake than they can in other bodies of water.

Which choice completes the text with the most logical transition?

- A) Ultimately,
 - B) Still,
 - C) As a result,
 - D) For example,
10. While researching a topic, a student has taken the following notes:
- The Second Congo War (1998–2003) was a civil war that killed an estimated three million people.
 - When Laurent-Désiré Kabila assumed the presidency of the Democratic Republic of the Congo, he presented an outward appearance of democratization to gain international aid dollars, while in reality, he banned political parties and public demonstrations.
 - By the end of 1998, a group of rebels made up of Kabila’s former allies and backed by the neighboring Ugandan and Rwandan governments controlled roughly one-third of the country.
 - Kabila received support from the neighboring Angolan, Namibian, and Zimbabwean governments in his fight against the rebels.
 - The war ended with a 2003 agreement that established a power-sharing transitional government and provided United Nations (UN) peacekeeping troops.

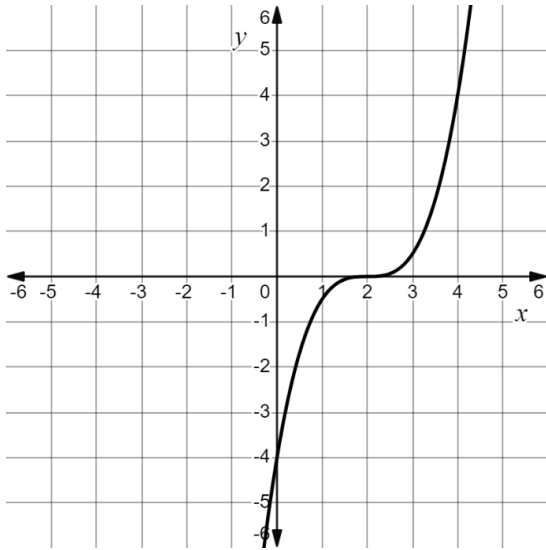
- Though the fighting had ended, the country's economy had collapsed, its social infrastructure was nonexistent, and the government was weak.

The student wants to emphasize the role of outside nations in Congo's civil war. Which choice most effectively uses relevant information from the notes to accomplish this goal?

- A) The Second Congo War was precipitated by President Kabila's duplicitous leadership, in which he presented a positive front to the international community to gain aid dollars despite severely limiting the rights of his citizens.
- B) Though the Second Congo War was ostensibly a civil war, the governments of several neighboring countries took sides in the conflict, and the war only ended with the support of UN peacekeeping troops.
- C) The Democratic Republic of the Congo required international support both before and after the Second Congo War in order to address a struggling economy, fragile social infrastructure, and ineffective government.
- D) When the Second Congo War broke out, neighboring nations quickly took sides, exacerbating the conflict and necessitating UN intervention to bring an end to the fighting.

SAT MATH

Directions: Choose the best answer for each of the following questions. You may use a calculator, but we recommend that you use the same calculator you intend to use on test day!



- The graph of $y=f(x)$ is shown in the xy -plane. What is the value of $f(0)$?
 - 4
 - 0
 - 1
 - 2
- The point $(-1, 9)$ is a solution to which of the following systems of inequalities?
 - $y > x$
 $y > -x$
 - $y > x$
 $y < -x$
 - $y < x$
 $y < -x$
 - $y < x$
 $y > -x$
- Which expression is equivalent to $x^2 - 17x + 60$?
 - $(x-20)(x+3)$
 - $(x-5)(x-12)$
 - $(x-3)(x+20)$
 - $(x+5)(x+12)$
- $15 < 2x + 10 < 25$
Which of the following is a possible solution to the given inequality?
 - 2
 - 5
 - 7.5
 - 15
- $P(t) = 5 \cdot 2^{0.1t}$
At a certain nutrient concentration and temperature, a bacterial population is modeled by the given function, where t is the time in hours since the initial measurement. Which of the following is the best interpretation of $P(50) = 160$ in this context?
 - After 50 hours, the population is 160 bacteria.
 - The population of bacteria multiplied by 50 is equal to 160.
 - After 160 hours, the population is 50 bacteria.
 - When the temperature is 50 degrees Celsius, the population is 160 bacteria.

6. The volume V , in cubic inches, of a cylindrical aquarium can be represented by the expression $\pi r^2 \left(\frac{3}{2}r\right)$, where r is the radius, in inches, of the aquarium. Which expression represents the height, in inches, of the aquarium?

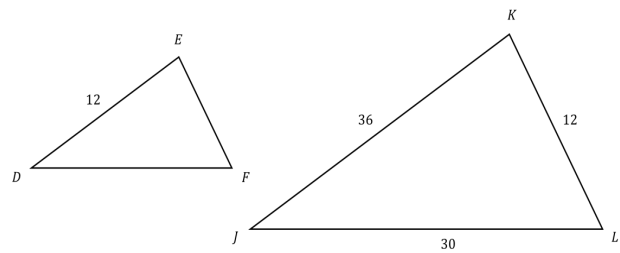
- A) $\frac{3}{2}$
 B) r
 C) $\frac{3}{2}r$
 D) $\pi r^2 \left(\frac{3}{2}r\right)$

7. The graph of $(x-5)^2 + (y+2)^2 = 16$ in the xy -plane is a circle. What is the circumference of the circle?

- A) 4
 B) 8
 C) 8π
 D) 16π

8. A certain stock increased in value by 5% on Monday, fell by 10% on Tuesday, and then increased by 7% on Wednesday. If the stock was worth x times as much at the end of Wednesday as it had been at the start of Monday, what is the value of x ?

- A) 1.00035
 B) 1.01115
 C) 1.02000
 D) 1.23585



Note: Figure not drawn to scale

9. In triangles DEF and JKL, angle D is congruent to angle J. Which additional piece of information would be sufficient to prove the triangles similar?

- I. $EF=4$
 II. $DF=10$
 III. $DF=14.4$

- A) II only
 B) I and II only
 C) II and III only
 D) I, II, and III

10. The equation $x^2 + y^2 + 6y = 18$ represents a circle in the xy -plane. If the area of the circle is $k\pi$, what is the value of k ?

- A) 18
 B) 27
 C) 54
 D) 729

ANSWER EXPLANATIONS

SAT Reading & Writing

- Choice A is correct.** This is a Text Structure and Purpose question. In this question, we are expected to pick the answer that best states the function of the underlined sentence in the text as a whole. In the text, Alice has just returned to her normal size. The underlined third sentence provides a transition that describes Alice's new setting (an open place with a four-foot-tall house). Since answer choice A best describes the intended purpose of the underlined sentence in the text, it is the correct answer.
- Choice B is correct.** This Words in Context question asks us to identify the best word to place in the blank within the text. This text discusses hail and some of the places in the world known for experiencing a lot of or notably large hail. The second sentence introduces Hail Alley while the sentence that contains the blank says that Hail Alley "is [blank] for spawning very large...hailstones." The last sentence lists other places "famous for huge hail." Thus, we can infer that the missing word must be a synonym of "famous." Given that the hail is described as "very large and potentially dangerous," we can anticipate the correct answer will have a negative connotation. Answer B, "notorious," which means "famous in a negative way or for doing something bad," is the best choice.
- Choice C is correct.** The final claim in the passage notes that the year belonged to Swift and that "no other musical artist came even remotely close to the record she set." This answer correctly emphasizes that claim by describing the second highest-grossing tour, by Beyonce. Notably, that tour grossed a little over half (56%) of what Swift's tour did, which supports the claim that Swift's sales vastly outstripped everyone else's.
- Choice B is correct.** In this Details question, the text describes the ways that narrative identities influence the way we see ourselves and our roles in society, noting that patterns in narratives correlate with a drive (or lack thereof) to contribute to society and with the presence (or lack thereof) of mental health issues like depression and anxiety. The text further notes that editing our narrative identities can resolve mental health issues by helping individuals to "regain control of our lives and find meaning in hardships."
- Choice B is correct.** The passage states that gnomon would cast "a shadow as the sun moves across the sky" and states that the gnomon itself is stationary. The lines "etched into the surface of the sundial" would tell the user the time of day depending on where "the shadow of the gnomon" was at that moment. This sentence wants to know about potential meteorological "conditions" that would render this device less useful. Because the device requires the movement of the sun in order to read it, then a lack of sunlight during the daytime ("stormy or quite overcast") would render it less useful.
- Choice B is correct.** This is a Standard English Conventions question focused on boundaries. In this question, we are expected to pick the answer that uses the correct

punctuation between the two independent clauses. We can begin by eliminating answer choice A because it creates a run-on sentence by not using either a period or comma and coordinating conjunction to separate the two independent clauses. Next, we can eliminate answer choice C because it inappropriately uses a comma with no coordinating conjunction to separate the independent clauses, creating a comma splice. This leaves us answer choices B and D. Answer choice B makes the independent clauses two sentences by adding a period, whereas answer choice D uses a coordinating conjunction to separate the independent clauses. Since a coordinating conjunction needs a comma before it when separating two independent clauses, answer choice D would create a run-on sentence. This makes answer choice B the correct answer.

- 7. Choice A is correct.** The blank occurs at the juncture of two clauses, so we can be pretty sure this is a sentence boundaries question. When we look at the answer choices, we see two different conjunctions used. Because there is no comma before the blank, we cannot use the conjunction “but”—coordinating conjunctions require a comma to combine two independent clauses. This allows us to eliminate choices C and D. Between choices A and B, the difference is in the verb tense. Choice A matches the present perfect tense used in the clause before the blank; choice B instead uses the future perfect tense. The future perfect tense describes an action that will occur before another event in the future, but there is no event in the future indicated in the text. Choice A, therefore, is the correct answer.
- 8. Choice C is correct.** The comma plus FANBOYS after “SHU” is necessary because we are creating a compound-complex sentence; the first part of this sentence is already a complex sentence because it utilizes a dependent clause beginning with “while.” Secondly, the modifying phrase “for a non-food comparison” is placed inside of commas here because it is nonessential. The example given is quite clearly not about food (“pepper spray used in self-defense”), so describing it this way is helpful but not essential to the sentence’s meaning.
- 9. Choice C is correct.** The sentence before the transition notes that “water never leaves the lake except through evaporation,” and the transition sentence says that the lake “keeps all of its mineral content” and becomes “saltier every year.” Because of how the passage concludes (“The large amount of salt left behind after water evaporates”), we can infer this is a cause-and-effect relationship. Because the water never leaves through any way but evaporation, and the evaporating water leaves behind its salt, the lake becomes saltier over time as water evaporates. Answer C is appropriately a cause-and-effect transition.
- 10. Choice B is correct.** The goal is to emphasize the role of outside nations in the Second Congo War. To do so, we need to incorporate information from bullets 3 (countries that backed the rebels), 4 (countries that backed Kabila), and 5 (UN intervention). Choice B best accomplishes this goal by noting both the intervention of neighboring countries and the UN role in ending the fighting.

SAT Math

1. The correct answer is **A**.

Given the graph of $y=f(x)$, the value of $f(0)$ must be the value of y that corresponds with $x=0$, in other words, the y -coordinate of the y -intercept. Since the given graph intersects the y -axis at $(0,-4)$, -4 is the correct answer.

2. The correct answer is **A**.

The point $(-1, 9)$ can be plugged into each answer choice to see which inequalities are valid for this point. The first answer choice has the y -value greater than x and $-x$, which is true for this point: $9 > -1$ and $9 > -(-1)$. So A is correct.

3. The correct answer is **B**.

An expression of the form x^2+bx+c , where b and c are constants, can be factored if there are two values which add to the value of b and multiply to the value of c . In the given expression, $b=-17$ and $c=60$. The values of -12 and -5 add to -17 and multiply to 60 , so the expression can be factored as $(x-12)(x-5)$.

4. The correct answer is **B**.

To find the range of possible solutions to the given compound inequality, need to isolate x in the middle. First subtract each part by 10, and then divide everything by 2 as follows:

$$15 < 2x + 10 < 25$$

$$5 < 2x < 15$$

$$\frac{5}{2} < x < \frac{15}{2}$$

Thus, the possible values of x must be between 2.5 and 7.5, so the only possible solution listed is $x=5$.

5. The correct answer is **A**.

The input variable is t , which represents time in hours, and the output of the function represents the population of bacteria.

6. The correct answer is **C**.

It's given that $V = \pi r^2 \left(\frac{3}{2}r\right)$, where V is the volume (in cubic inches) and r is the radius (in inches) of a cylindrical aquarium. In general, the volume of a cylinder can be found using

the formula $V=\pi r^2 h$, so the height of the cylindrical aquarium can be represented by the expression $\frac{3}{2}r$

7. The correct answer is **C**.

The constant on the right side of the equal sign is the radius of the circle squared. Therefore, the radius is equal to 4. We can find the circumference using the formula $C=2\pi r=2\pi(4)=8\pi$.

8. The correct answer is **B**.

Since the question states that the stock's value increased by 5% on Monday, we can apply Monday's percent change by multiplying the original value of the stock by $(1 + \frac{5}{100})$ or 1.05. Likewise, we can apply the 10% decrease on Tuesday by multiplying $(1 + \frac{7}{100})$ or by 1.07. Therefore, the final value of the stock at the end of Wednesday will equal original value $\times (1.05)(0.90)(1.07)$, or $1.01115 \times$ original value. Since the question states that the stock was worth x times as much at the end of Wednesday as it was at the start of Monday, we can determine that x must equal 1.01115.

9. The correct answer is **C**.

Since $\angle D \cong \angle J$, if the sides that form those angles are proportional, we can prove the triangles similar using the SAS~ similarity theorem. However, the correspondence hasn't been specified, so either $\frac{DE}{JK} = \frac{DF}{JL}$ or $\frac{DE}{JL} = \frac{DF}{JK}$ would be a valid proportion. Statement II uses the first of these: $\frac{DE}{JK} = \frac{DF}{JL} \rightarrow \frac{12}{36} = \frac{10}{30}$ Statement III uses the second: $\frac{DE}{JL} = \frac{DF}{JK} \rightarrow \frac{12}{30} = \frac{14.4}{36}$. While statement III appears to establish a proportion between sides, $\frac{DE}{JK} = \frac{EF}{KL} \rightarrow \frac{12}{36} = \frac{4}{12}$, the congruent angles are not the included angles between these sides, and there is no SSA~ similarity theorem.

10. The correct answer is **B**.

Complete the square with respect to y to obtain an equation for the circle in standard form:

$$\begin{aligned}x^2+y^2+6y&=18 \\x^2+(y^2+6y+9)&=18+9 \\x^2+(y+3)^2&=27\end{aligned}$$

With the equation in this form, the constant on the right side of the equation is the square of the radius. We can use this directly in the formula for the area of a circle:

$$A=\pi r^2=27\pi$$

The question asks for the coefficient of π , which is the square of the radius, 27.

HOW SHOULD I PREPARE?

How did you score on each section?

1-3

It looks like you might have some foundational gaps that need to be addressed. Students who score in this range often need to build up core skills before targeting more specific areas in their test prep. This takes time, so it's important that you get started today!

4-6

The bad news? This means you might only score in the 400s on that specific section of the SAT. The good news? This score range often sees the fastest score improvements from test prep!

7-10

If you're aiming for top scores, you've got a challenge in front of you: the only way to earn a perfect score on a specific section is to miss no more than 1 or 2 questions. Your test prep will need to focus on mastering the most challenging topics so that you can tackle every single question on the test with confidence and speed.



FOR MORE INFO, INSIGHTS, AND WAYS TO MAKE SURE YOU ARE READY TO CRUSH THE SAT, CONTACT YOUR C2 EDUCATION CENTER TODAY!